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Originals

A New Species of *Indigofera* (Leguminosae) in Luzon Island of the Philippines

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Indigofera erectifructa Y. Endo, H. Ohashi & Madulid is described from Luzon Isl., the Philippines, as a new species. It resembles *I. galegoides* DC. in its erect pods, but differs in having the larger flowers and smaller pods.

Key words: *Indigofera*, *Indigofera galegoides*, Leguminosae, new species, Philippines.

An unknown plant of *Indigofera* characterized by erect pods attached to an erect infructescence was found in Luzon Isl., the Philippines in 1998 (Figs. 1–3). The erect pods (Fig. 1a) are remarkable and is considered to be an apomorphic trait in tribe Indigofereae (Schrire 1995). The feature has been known only in *I. galegoides* DC. among the known *Indigofera* species in the Philippines (Merrill 1923). Species having such erect pods are recorded in China, i. e., *I. daochengensis* Y. Y. Fang & C. Z. Zheng and *I. densifructa* Y. Y. Fang & C. Z. Zheng, but are not known in Burma (Sanjappa 1985), Cambodge, Laos, and Vietnam (Thuân et al. 1987), and Southeastern Asia (Kort and Thijsse 1984).

Comparing the unknown plants with the other three known species with erect pods they clearly differ in flowers and fruits as shown in Table 1. The plants have larger flowers than *Indigofera densifructa* and *I. galegoides*, but have shorter pods than *I. galegoides*. They have glabrous anthers, but *I. daochengensis* has hairy ones, and their lowest calyx tooth is shorter than that of *I. daochengensis*. We consider that the plants are closest to *I. galegoides* but are a new species for which the following description is given:

Indigofera erectifructa Y. Endo, H. Ohashi & Madulid, sp. nov.

Species nova *Indigofera galegoidi* proxima, sed floribus majoribus, leguminibus brevioribus differt.

Shrubs ca. 3 m high; leaves imparipinnate, 10–11 cm long, 15–19 leaflets per one leaf; leaflets elliptic, oval or ovate, 15–30 mm long, 8–10 mm wide; petiolule ca. 3 mm long, both sides covered by short, appressed biramous hairs; petiole 10–12 mm long; stipule linear, curved abaxially, ca. 3 mm long; stipel linear, ca. 1 mm long; inflorescence 13–14 cm long, 50–80 flowers per inflorescence; bracteole linear, ca. 1.5 mm long; flower pink (Fig. 2), ca. 12 mm long; peduncle ca. 4 mm long; calyx dorsally pubescent with brown or dark brown, appressed, dense biramous hairs (Fig. 1b); calyx teeth ca. 0.5 mm long (Fig. 1c); calyx tube ca. 1.5 mm long; calyx spreading out

Table 1. Several features of pods and flowers of *Indigofera erectifructa* found in the Phillipines, *I. daochengensis*, *I. densifructa*, and *I. galegoides*. The data of the latter three species are got from Fang and Zheng (1983, 1989, 1994)

Species	fruit length (cm)	standard length (mm)	wing length (mm)	anther hair	lowest calyx tooth length (mm)
I. erectifructa	ca. 3.5	ca. 13	ca. 10	absent	0.5
I. daochengensis	4–4.5	12–13	10–11	present	2.5
I. densifructa	2–3.5	ca. 6	ca. 5	absent	0.5
I. galegoides	–9	8–9	ca. 8	absent	–

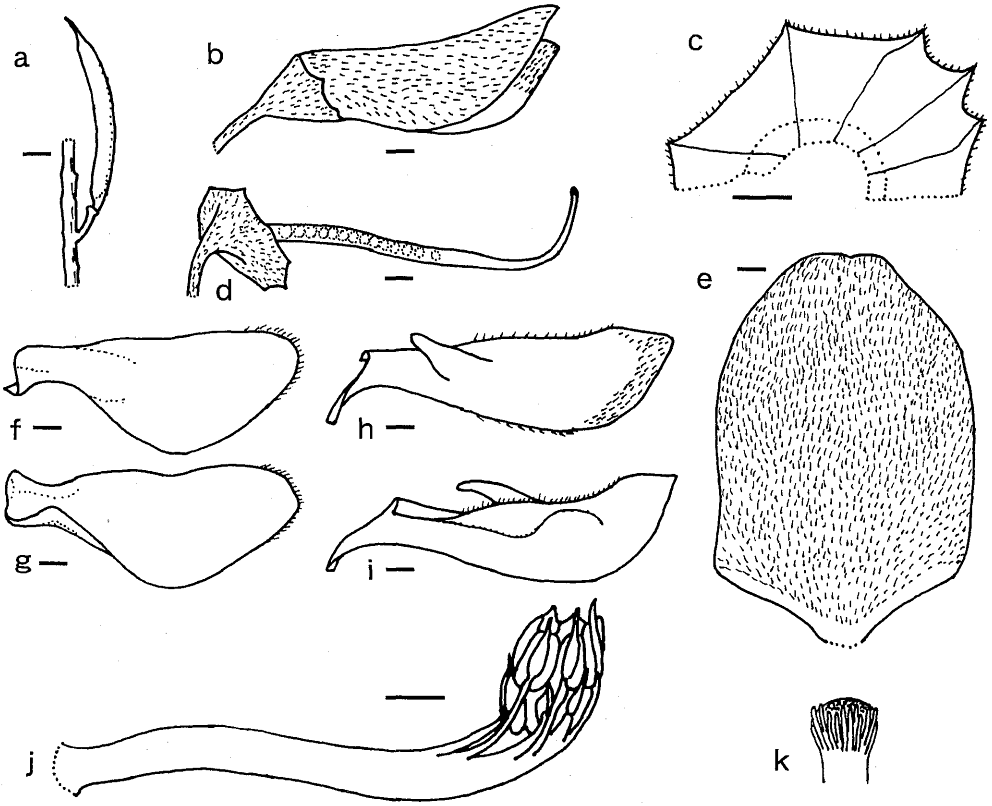

Fig. 1. Floral organs and a pod of *Indigofera erectifructa* Y. Endo, H. Ohashi & Madulid. Pod (a). Younger flower (b). Calyx (c), wing petals (f, g), keel petals (h, i), androecium (j), and stigma (k) from younger flower just before flowering. Pistil (d) and standard petal (e) from a flower after flowering. c, g, i; adaxial sides. e, f, h; abaxial sides. k; stigma enlarged to show hairs surrounding the basal part of the stigma. Scale bars indicate 5 mm in (a) and 1 mm in (b)–(j).

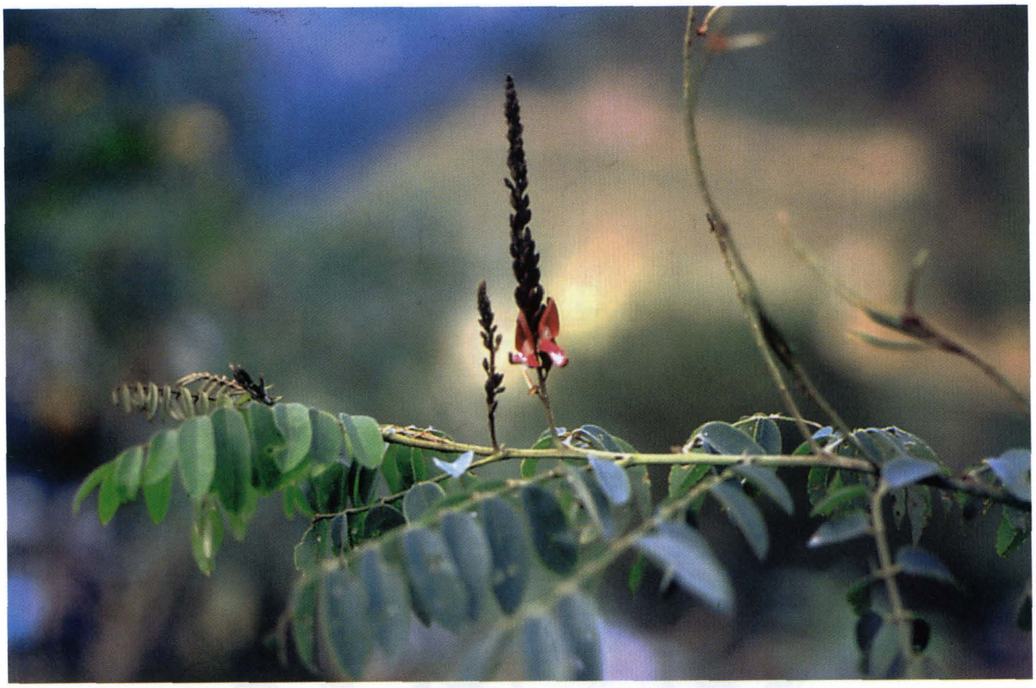

Fig. 2. Living flowers of *Indigofera erectifructa* Y. Endo, H. Ohashi & Madulid taken at Luzon Island of the Phillipines in 1998.

after flowering (Fig. 1d); pearl bodies distributed near calyx mouth; standard ca. 13 mm long, dorsal surface with dark brown or brown, appressed, dense biramous hairs (Fig. 1e); wing ca. 10 mm long, apical part fringed with hairs (Fig. 1f, 1g); keel ca. 12 mm long, an adaxial side fringed with hairs, dorsal surface of apical part covered with brown biramous hairs (Fig. 1h, 1i); anther connective elongated, 0.5 mm long (Fig. 1j); pistil ca. 11 mm long; stigma collared with hairs (Fig. 1k); ca. 14 ovules per one ovary; infructescence erect; pod ca. 3.5 cm long, erect, curved adaxially; pod apex pointed (Fig. 1a).

Type: Philippines, Luzon Isl., Mountain Prov., Bontoc Town, near Talubin, alt. 1000–1030 m; 17°02′N, 121°00′E., 3 Nov. 1998. T. Nemoto, E. J. Reynoso, Y. Endo, Y. Iokawa, K. Yonekura, T. Ibaragi & F. J. Gaerlan 10630 (Holotype in TUS, Fig. 3).

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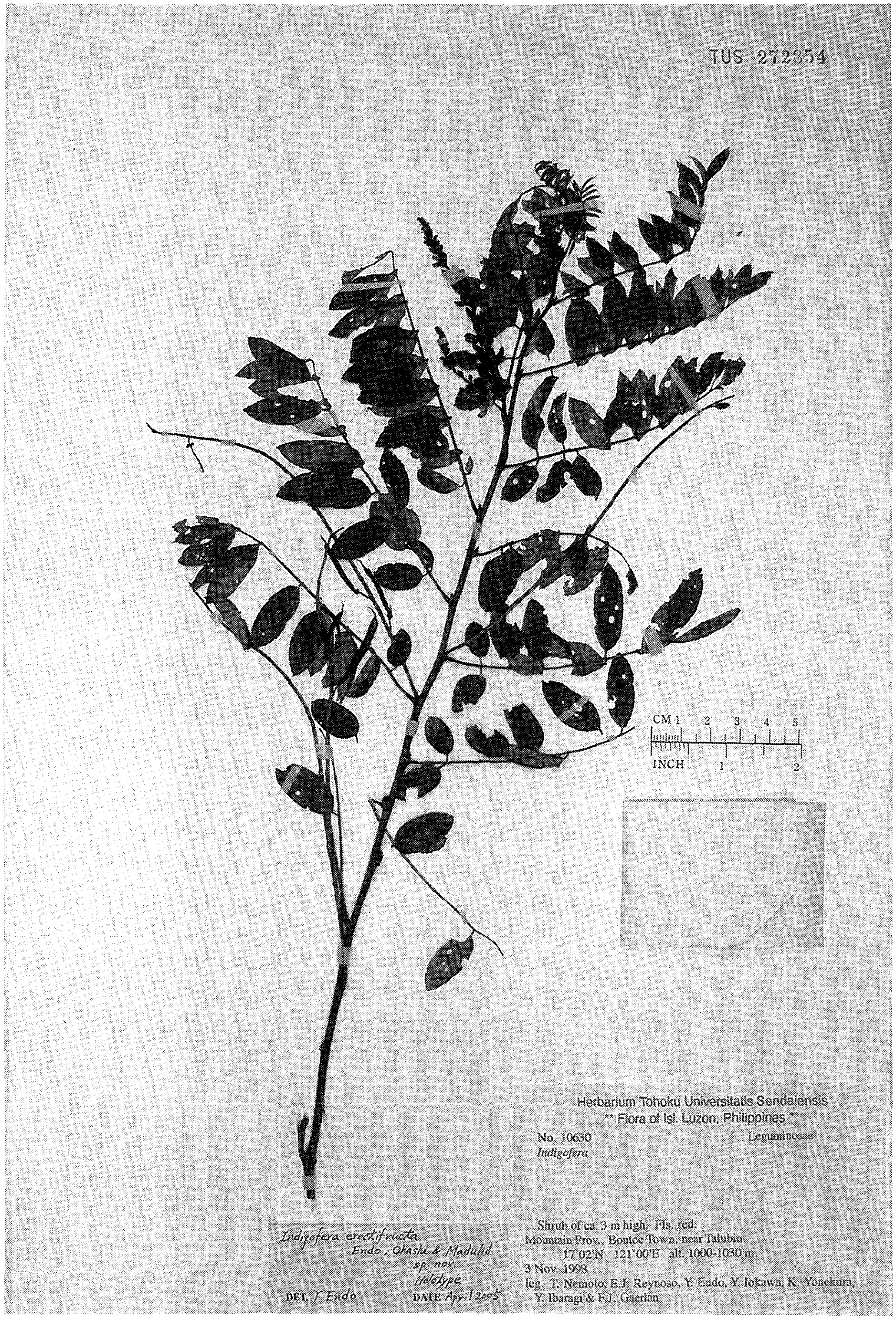

Herbarium Tohoku Universitatis Sendaiensis
** Flora of Isl. Luzon, Philippines **
No. 10630 Leguminosae
Indigofera

Shrub of ca. 3 m high. Fls. red.
Mountain Prov., Bontoc Town, near Talubin.
17°02'N 121°00'E alt. 1000-1030 m.
3 Nov. 1998
leg. T. Nemoto, E.J. Reynoso, Y. Endo, Y. Iokawa, K. Yonekura, Y. Ibaragi & F.J. Gaerlan

Indigofera erectifructa
Endo, Ohashi & Madulid
sp. nov.
Holotype
DET. Y. Endo DATE April 2005

Fig. 3. Holotype specimen of *Indigofera erectifructa* Y. Endo, H. Ohashi & Madulid (TUS).

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遠藤泰彦[a]，大橋広好[b]，D. A. マドリッド[c]：フィリピン産コマツナギ属（マメ科）の一新種

フィリピンのルソン島で，果序に沿って莢果が立上がるコマツナギ属植物を発見し，*Indigofera erectifructa* Y. Endo, H. Ohashi & Madulid と命名した．この植物の旗弁（最も外側の花弁）は長さ約13 mm，莢果は長さ約3.5 cmであった．

フィリピン産コマツナギ属で *Indigofera erectifructa* と同様に立上がる莢果をつける種として *I. galegoides* DC. が知られている（Merrill 1923）．しかし，*I. galegoides* は旗弁の長さが8–9 mmで，莢果の長さが9 cmに達することから *I. erectifructa* から識別される．一方，フィリピンの周辺の地域に産し，立上がる莢果をつける種としては，*I. galegoides* 以外に *I. daochengensis* Y. Y. Fang & C. Z. Zheng と *I. densifructa* Y. Y. Fang & C. Z. Zheng の2種が中国で記載されている（Fang and Zheng 1983）．しかし，*I. daochengensis* は葯隔が有毛であることと最下の萼歯がより長いことで，*I. densifructa* は旗弁の長さが約6 mmしかないことで共に *I. erectifructa* から識別される．

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